VERMARCO

EXTERIOR MARBLE

4b
V6

for Veneer, Curtain and Masonry Walls

ERIE INSURANCE EXCHANGE
ERIE, PENNSYLVANIA

Vermarco Highland Danby Marble

Architects—Nelson, Goldberg & Heidt

VERMONT MARBLE COMPANY

PROCTOR, VERMONT

AIA FILE No. 6-B-1 (50)

Savings Fund Society
Germantown, Pennsylvania
Baader, Young and Schultz, Architects

Public Service Building
Salem, Oregon
Whitehouse, Church, Newberry and Rohr, Architects

West Genessee Central High School
Camillus, New York
Sargent, Webster, Crenshaw & Folley, Architects

Top right — **Iowa Masonic Library**
Cedar Rapids, Iowa
Hansen and Waggoner, Architects
William L. Perkins, Consultant

Center right — **Equitable Life Building**
San Francisco, California
Loubet and Glynn, Architects
Irwin Claven, Consulting Architect

Bottom right — **United Nations Secretariat and General Assembly Buildings**
Wallace K. Harrison, Director of Planning

VERMONT MARBLE

the product—

Today, the Vermont Marble Company is producing exterior marble for some of the nation's most modern structures, as illustrated on these pages. Vermont marble has proved adaptable to all requirements, at the same time affording the distinctive beauty for which it is famous. In addition to its beauty, the basic qualities of Vermont marble make it eminently suitable for modern exterior construction.

In composition, it is made up of 99% carbonate of lime crystals, having a uniform coefficient of expansion; if heated or cooled, all parts expand or contract at the same rate. Stones which are made up of different minerals have a tendency to push and pull apart as they are heated and cooled.

Government Bulletins show that Vermont marble as compared with other building stones has the lowest rate of absorption, that for marble being from one-tenth to two-tenths of one percent by weight. In the grades used for exterior purposes it tests near the lower limit. In other words, 100 pounds of this marble immersed in water for a considerable period will absorb about 1/10 of 1 pound of water. Considering the fact that a piece of marble properly set in a building seldom has more than one or two faces exposed and almost never remains under water, the rate of absorption is negligible.

In crushing strength Vermont marbles recommended for exterior building work would sustain the weight of a tower two miles high.

the organization in back of it—

The installations of structural marble by the Vermont Marble Company in the impressive buildings shown on the opposite page result from the growth of a large and stable organization over a long period of time.

Marble was first produced in Vermont in pre-Revolutionary days. In 1784 the first commercial marble quarry in North America was opened. Continued expansion resulted in the formation of the Vermont Marble Company in 1880.

scope of business Exterior building marble had been sold by its predecessors, but this product was greatly expanded by the newly formed Company. For the past 75 years this has been one of its principal lines of activity, and during this period the Company's facilities and sales policy have constantly kept pace with the growth and progress of architectural design.

Vermont Marble Company activities are on a wide scale in the quarrying of marble in North America and the importing of marble and granite for building purposes from foreign countries. Mills for sawing marble and thin granite are operated in Vermont and at several of the branch plants. (See back cover.) Finishing of marble for both exterior and interior building work and of imported granite for thin building applications is under way at the same plants. Through subsidiary connections the manufacturing of many by-products of marble has been extensively developed. A contracting organization is maintained for the installation of building marble, with branches in principal cities. (See back cover.)

staff and equipment A sales force for both building and monumental marble business is maintained at all times. In addition to its complete facilities in Vermont, the Company operates large and newly equipped finishing plants for marble and thin granite in the Middle and Far West and in Canada. (See back cover.)

industrial associations The Company contributes generously to the advancement of the building industry, particularly in the use of marble, by its membership in the Marble Institute of America, the National Association of Marble Producers, the National Association of Marble Dealers and the Producers' Council, Inc.

technical service The Company maintains a Research Department making studies and recommendations of the best methods to be employed in all departments in the marble industry. A booklet thus prepared on "Marble Cleaning Methods and Materials" is available on request.

Through the Marble Institute of America with its office at 32 South Fifth Avenue, Mount Vernon, New York, a new book entitled "American Standard Specifications" has been made available for the assistance of architects and builders, containing exhaustive information as to the sources and characteristics of both domestic and imported marbles, details of marble construction, specifications for finishing and installing marble and describing all of the proper practices established by long experience in this field.

film—"New Worlds of Marble" This is our 16 mm. sound film in color for a 27 minute program of entertainment and information available to Architects and Builders' Associations, Architectural Schools, and similar groups. Apply to our Home Office, Proctor, Vermont.

endorsed by architects and their clients

Not only has the U. S. Government used Vermont marble for its greatest memorial projects, but prominent American architects and their clients in all parts of the country, have specified it in their buildings and monuments.

The opposite page and the following list show just a quick sampling of the many installations of Vermont marble made from coast to coast.

Union Central Life, Cincinnati
Museum of Art, Toledo
Girard College, Philadelphia
U. S. Supreme Court, Washington
Jefferson Memorial, Washington
Arlington Memorial, Arlington
Connecticut General Life Insurance Building, Hartford
Dupont Memaoril, Wilmington
Veterans Memorial, Detroit
Museum of Art, Detroit
Ohio Farmers Insurance Building, Leroy, Ohio
Robinson Store, Los Angeles
Forsyth Dental Infirmary, Boston
Federal Reserve Bank, Philadelphia
Sakowitz Store, Houston
Tomb of the Unknown Soldier, Arlington
County Court House, Providence
Oregon State Capitol, Salem
Roosevelt Monument, Hyde Park
St. Gaudens Memorial, Cornish, N. H.
Lilienthal Memorial, San Francisco
Magnin Store, Los Angeles
City-County Building, Detroit
Magnin Store, Seattle
West Columbia School, West Columbia, Texas
State Office Building, Pittsburgh
North American Building, Chicago
New U. S. Senate Office Building, Washington

VERMONT MARBLE VENEER

selection guide

Imperial Danby, sand finish; white with golden brown marking.

Eureka Danby, sand finish; white background with golden brown surface marking rather liberally distributed.

Highland Danby, sand finish; slightly gray background with darker gray surface marking.

Royal Danby, sand finish; white with gray to black markings.

Regal Danby sand finish; light background with greenish gray veins and clouds.

Vermont Gray (2″ thick and over) sand finish; even in tone and economical in price.

Vermont Pearl (2″ thick and over) sand finish; white background, freely marked with green clouds or veins.

Vermarco White (2″ thick and over) sand finish; predominantly white with very light clouds or veins.

Veneer slabs should be confined to individual pieces from 8 to 10 sq. ft. in area.

specifications

Scope—This specification shall include the furnishing of all material and labo necessary for the completion of all marble veneer work required by the drawings, except that scaffolding will be furnished and erected by others.

Material—All exterior marble veneer shall be a natural marble known as (select desired name from list above) from the quarries of the Vermont Marble Company wherever shown or called for on the architect's drawings. If other than Class "A" marble is used it shall be treated as required by the classification of the Marble Institute of America.

Quality—All marble shall be sound and of good quality, free from defects that would impair its strength or durability.

Samples—Before proceeding with the work, this contractor shall submit to the architect a sample of the marble specified and upon approval by the architect said sample shall become the standard for selection on the building.

Drawings—Detailed drawings will be furnished by the architect to the marble contractor for all work requiring them. Said contractor shall make and submit for the architect's approval shop drawings showing proposed layout and jointing.

Thickness—All veneer shall be as hereinafter specified for this type of building, and other members of marble, if any, shall be of dimensions detailed.

Finish—All exposed marble surfaces shall have sand finish.

Joints—At least 3/16″ shall be maintained between edges.

Expansion Joints—In large areas of exterior veneer, vertical expansion joints shall be provided at intervals of about 30 feet. Horizontal expansion joints shall be provided at each or at least every second floor level.

Cutting—The marble contractor shall do all necessary cutting and fitting to accommodate his work to other trades as called for on the drawings and by common usage in the trades. This shall be done at the manufacturer's finishing shop where possible.

Measurements—Before commencement of shop work on marble the architect will establish and guarantee to the contractor all governing measurements and note them on the drawings and all related trades shall conform to said measurements.

Support—Weight of veneer shall be relieved by continuous horizontal shelf angles of non-corrodible metal supplied and securely fastened to the building frame or masonry wall by others. These angles (Detail A) shall be at grade or sidewalk level, above door and window openings, over awning boxes, at each storey height or in any event not more than 20 feet apart. The same applies to pilasters and other vertical facings.

Flashing—(Furnished by Others) (Detail K and L)—All top joints, either on projecting courses or at the top of the veneer area shall be properly flashed over with non-ferrous, non-staining sheet metal flashing, or covered by a non-ferrous, non-staining weather cap strip pressed into the joints filled with non-staining mastic compound, and raglets for metal flashing where required shall be filled in like manner. A completely waterproof installation must be provided.

Cleaning—Upon completion of various portions of this work, this contractor shall remove all unused surplus materials, rubbish, debris, etc., in connection with this contract and shall give marble a thorough cleaning, to satisfaction and approval of architect and owner. No acids or harsh abrasive cleaners or steel wire brushes shall be used. Ordinarily, scrubbing with fibre brush and clear water will clean marble. If additional cleaning is needed, consult manufacturer.

SETTING SPECIFICATIONS

Cleaning—At all stages of the setting process, marble must be kept clean and free of setting materials and dirt.

Procedures for Principal Types of Building Construction

Type I—One or Two-Storey Installations including Store Fronts—Thickness of all veneer shall be 1¼″ (Detail A). Backs of all veneer pieces shall be thoroughly coated before setting with approved damp-proofing paint and attached to building wall by concealed wall ties or anchors (1) at least ⅛″ diameter of brass or medium hard drawn copper (Detail B) or (2). Stainless Steel 1/16″ flat anchors (Detail C) as follows:

a)—For slabs of marble of over 2 square feet and up to 4 square feet in area, at least 3 anchors;

b)—From 4 square feet to 12 sq ft, at least 4 anchors;

c)—From 12 sq ft. to 20 sq ft, at least 6 anchors;

d)—On slabs exceeding 20 sq ft anchors shall be provided at the rate of 1 anchor for each 3 sq ft in area.

Anchors shall be attached to the veneer by being hooked or embedded in cement filled holes or saw-cut channels ¾″ deep in edges of veneer parallel to face. Attachment to the wall shall be made by hooking the anchor into a pocket (Detail D) properly drilled into the backing and shaped to receive and retain it and filled with non-staining Portland Cement Mortar with accelerator (Sika C or equal).

Allow at least 1″ clearance back of veneer (Detail L) and set each piece rigidly against spots of non-staining Portland Cement with accelerator, locating these spots at or near the anchors and spaced not more than 18″ apart over the back of each piece.

NOTE: Where marble is to be set upon (or immediately above) cement foundation, the cement shall be damp-proofed on top and the clearance specified (Detail F) above shall be provided (not grouted) to avoid traveling of moisture.

Joints—Edges of all marble pieces forming joints shall be buttered with sufficient non-staining mastic (as recommended by Vermont Marble Company) to completely fill the joint. Spacers shall be used to maintain the width of the joint, shall be kept back at least ¼″ from the face and shall be entirely surrounded with mastic.

Alternate—edges of all marble forming joints shall be buttered full with non-staining cement mortar and raked back a minimum of ½″ to receive non-staining mastic. Mortar shall be dry before mastic is applied. Spacers shall be used as above.

Type II—Multi-Storey Installations with backup Masonry—Thickness of all veneer shall be 1¼″, 1½″, or 2″ (specify which). Specifications above (One or Two-Storey) shall govern in all respects as to the veneer of the one or two-storey feature. Above that point the same method may be employed where the masonry wall is already in place as in alteration work, on condition that the 1″ clearance back of veneer is provided. Otherwise, see alternate method (next paragraph).

Alternate—For New Construction—As veneer is set all pieces shall be completely parged (Detail G) on the backs with neat non-staining Portland Cement paste which shall be allowed to set and then backed up with masonry materials specified. No damp proofing paint shall be applied where parging is to be used.

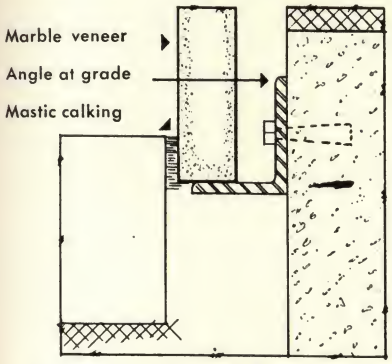
Where marble is to be set upon (or immediately above) cement foundation (Detail F), the cement shall be damp-proofed on top and joint shall be thoroughly calked with non-staining mastic compound to prevent any traveling of moisture.

Joints—Follow same procedure or alternate as under Joints under Type I.

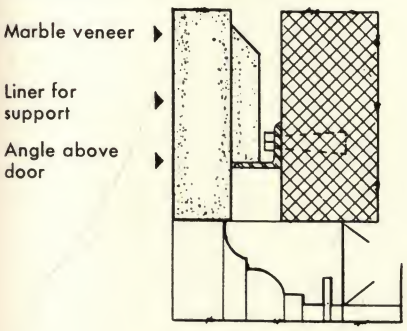
Type III—Multi-Storey Reinforced Concrete Wall—Backs of veneer pieces shall not be damp-proofed or parged. A system of non-corrodible metal slots or boxes built into the concrete wall by others and non-corrodible dove-tail or T-tail wall ties or anchors properly fitted and satisfactory to the architect and embedded in the edges of veneer pieces as described above (One or Two Storeys) shall be used (Detail H).

Joints and Backing—Allow at least 1″ clearance between back of veneer and concrete wall and grout this space full with non-staining cement grout (Detail I) made with clean washed sand, said grout to be poured after each course of veneer is set in place to a depth that will not affect alignment (6″ for 1¼″ and 10″ for 2″) rodded and puddled and allowed to set enough to carry the weight of the next pour. Joints shall be buttered full with white Portland Cement lime mortar and shall be made absolutely water-tight by raking out mortar joint to a depth of at least ½ inch and completely filling with Vermont non-staining mastic, gray or white color. Grout and joint cement must be dry before pointing with mastic.

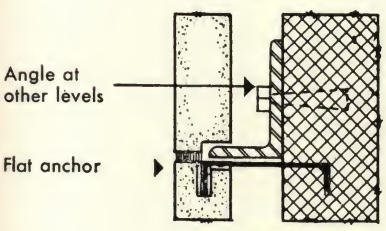
Vermont marble veneer



Detail A



Detail A



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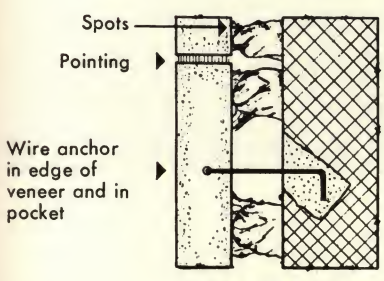
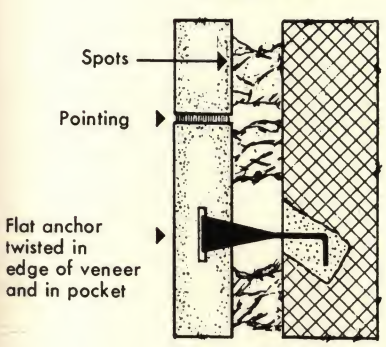
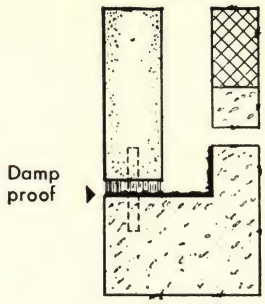


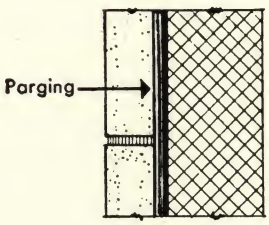
Detail B & D



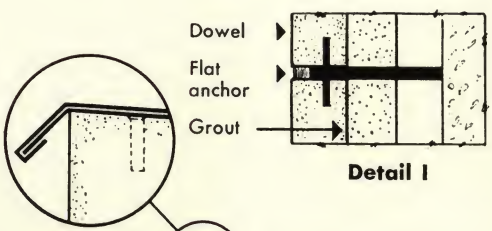
Detail C & E



Detail F

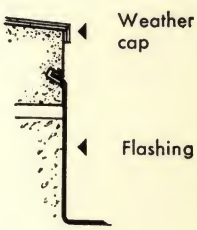


Detail G

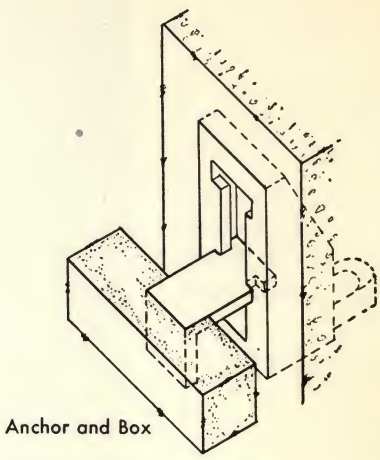


Detail I

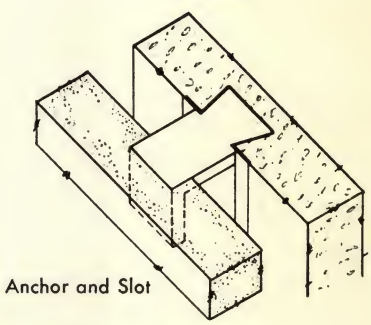
Detail K



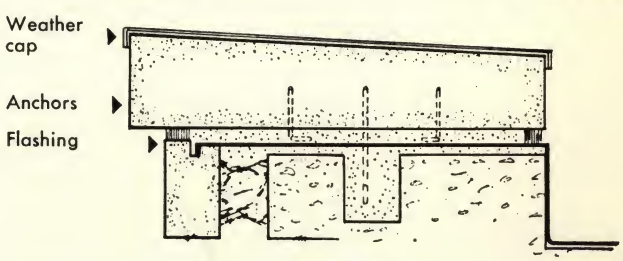
Alternate Detail K



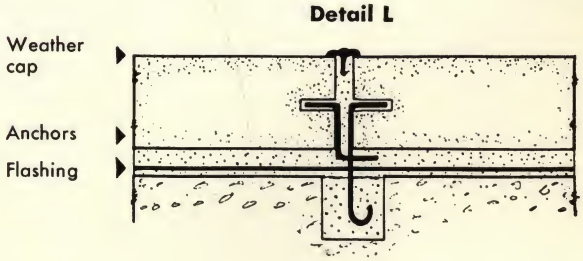
Detail H



Detail H



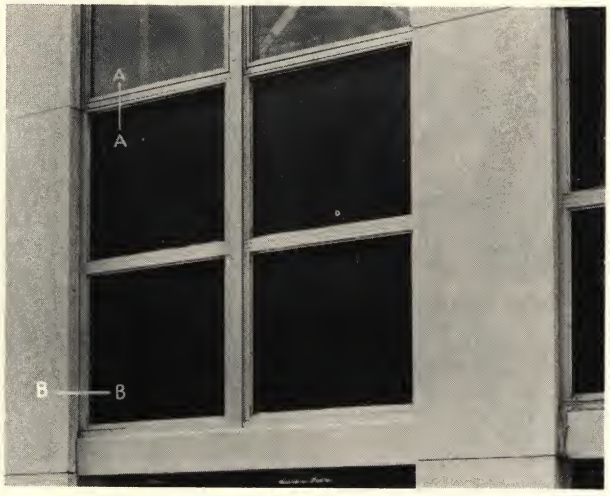
Detail L



Detail L

City-County Building
Detroit, Michigan

Architects:
Harley, Ellington and Day, Inc.



Exterior marble from the Danby, Vermont, quarries is used in the ends and pilasters of the City-County Building. Special attention is here directed to the spandrels of Serpentine set in frames and fastened to the structure as shown in detail at the left.

For sections A-A and B-B, see details on the opposite page.

VERMONT MARBLE SPANDRELS

specifications

MARBLE AND SERPENTINE—

This specification covers the material and workmanship in connection with the spandrels alone where the balance of the face of the building is to be of other materials. If additional marble or granite is used for the exterior, refer to Specifications for "Exterior Marble Veneer" (page 4), "Exterior Marble, Masonry Walls" (page 8), "Granite Veneer" folder (page 3). Scaffolding shall be furnished and erected by others.

Certain general specification paragraphs applying to spandrels are not repeated here as they are already included in the specifications mentioned above. They may be inserted here for spandrels alone or, if the additional material is required, the two applicable specifications may be combined. Said paragraphs are entitled: Material — Quality — Samples — Drawings — Joints — Expansion Joints — Cutting — Measurements.

THICKNESS—

Spandrels may be 7/8", 1 1/4", 1 1/2" or 2" (specify which).

FINISH—

All exposed surfaces of spandrels shall have honed finish if dark or a sand finish if light in color.

JOINTS—

At least 3/16" shall be maintained between edges.

SUPPORT—

Weight of spandrels shall be supported by and the spandrel shall be set into metal frames supplied and installed by others as elsewhere specified. Said frames shall be of non-ferrous, non-staining material and shall be so designed as to not only hold the spandrels securely in place, but also to receive and retain the mastic pointing and calking hereinafter specified and insure a completely waterproof installation.

SETTING, ANCHORING AND CALKING—

All setting materials and dirt of all kinds shall be cleaned from the face of all spandrels before and during the process of setting.

Spandrels, when set into metal frames shall have all edges buttered full with non-staining mastic as they are set. When in place the edges shall be pointed with non-staining mastic both before and after frame is fastened overlapping edges of spandrels.

The mastic pointing compound shall be suited to its location and be elastic, waterproof and acid resistant, and shall not stain or otherwise injure the marble or other materials with which it comes in contact. It shall retain its plasticity and adhesiveness indefinitely. It shall be supplied in the best color obtainable to match the adjoining surfaces.

Joints, if any, between marble pieces, shall be maintained in width by spacers of proper thickness placed at least 1/2" back from face. Edges of marble shall be buttered full with non-staining mastic or (with the exception of 7/8" thickness) buttered full with non-staining cement mortar and raked back a minimum of 1/2" and filled with mastic when dry.

WATERPROOFING—

Backs of all spandrel pieces shall be thoroughly coated with approved damp proofing paint except where parging or insulation is later to be applied to marble.

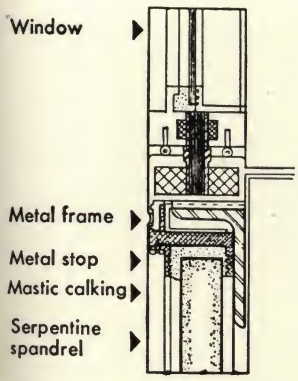
CLEANING—

Upon completion of the various portions of this work, this contractor shall remove all unused surplus materials, rubbish, debris, etc., in connection with this contract and shall give the marble work a thorough cleaning, to the satisfaction and approval of the architect or owner. No acids or harsh abrasive cleaners shall be used in cleaning marble. Ordinarily a scrubbing with fibre brush and clear water will clean marble. If additional cleaning is needed, see booklet entitled "Marble Cleaning Methods and Materials."

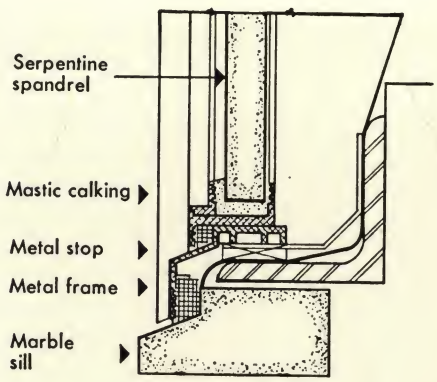
BUILDING CODES—

NOTE: Architects and prospective builders should see that their design conforms to the building code in the city in which it is to be erected. All of the above suggestions as to specification are subject to correction to conform to such codes.

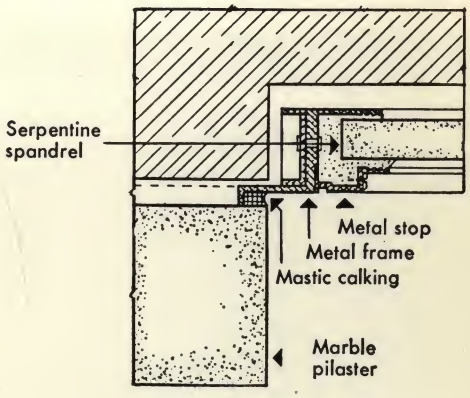
spandrel details



Section A-A



Vertical Section 1st floor



Section B-B

VERMONT MARBLE CURTAIN WALLS

brief guide for specifications and details

Material and Quality—All marble (insert name of variety) shall be selected for uniform color, sound and free from defects which impair its strength or durability.

Samples—(same requirements as listed under veneer.)

Drawings—Detailed Drawings will be furnished by the architect including the metal framing. The marble contractor shall submit for architects approval, shop drawings showing proposed layout as related to the metal framing.

Thickness—All curtain wall marble in frames shall be 1¼" thick with a tolerance in thickness of 1/16" over or 1/16" under this dimension. Other marble not in metal frames to be thickness and dimensions detailed on the drawings.

Finishes—NATURAL:—A finish produced by sawing.
SAND FINISH:—A smooth finish produced by sand rubbing.

Joints—None. (No marble in a metal frame shall be jointed.)

Cutting—The marble contractor shall do all necessary cutting and fitting to accommodate his work to other trades as called for on the drawings. This cutting shall be done at the finishing shop before shipment unless otherwise specified.

Measurements—Before starting shop work on marble, the architect will establish all governing measurements including those for the metal frames,—all measurements to be noted on the drawings.

Supports—Weight of marble shall be supported by the metal frame and no weight shall be allowed to bear upon the panels. (Also see setting.)

Setting—The face of the marble shall be kept clean at all times both before and during the process of setting.

Marble panels shall be set on and completely supported by non-staining and non-corrodible metal frames (including strips, angles and battens) all to be supplied by others and specified elsewhere.

The portion of this frame attached to the building structure shall be set in place by others but the strips, angles and battens for securing the marble in place shall be set by the marble contractor.

Caulking—Bottom edge of marble must rest upon plastic or aluminum cushions of proper thickness and evenly spaced to support weight of panel and allow for caulking.
All edges including adjoining surfaces covered by the frame shall be caulked or pointed full with non-staining mastic.
Metal frames should be so designed to allow access from the outside face. (See details Page 5.)

Flashing—Furnished and installed by others, flashing must be completely watertight and be non-staining to the marble below.

selection guide — see marble veneer, page 4

VERMONT MARBLE MASONRY WALLS

selection guide

Imperial Danby sand finish; white with golden brown marking.

Eureka Danby sand finish; white background with golden brown surface markings rather liberally distributed.

Highland Danby sand finish; slightly gray background with darker gray markings.

Royal Danby sand finish; white with gray to black markings.

Vermont Gray, sand finish; even in tone and economical in price.

Vermont Pearl, sand finish; white background freely marked with green clouds or veins.

Vermarco White, sand finish; predominantly white with very light green clouds or veins.

Vermont white-roof—marble roofing aggregate

A white marble granular roofing material. It assures maximum reflection of sun rays, therefore a cooler air space under the roof.

Vermont White roofing granules give long life. The crystalline marble is cleaned with every rain; it remains white. VERMONT WHITE-ROOF rates very high in reflecting the sun's rays, thus resisting the induction of heat, and keeping the building cooler. The granules are specifically crushed and sorted in sizes to assemble compactly for maximum roof protection.

Vermont White Roofing Granules are supplied in 100 pound bags and are easily handled. Four to five bags will cover 100 square feet depending on type of roof.

Vermont White Roofing Granules are reliable, available, and the service is prompt, thus meeting the requirements for home, industrial or other building construction.

VERMONT MARBLE COMPANY

Home office and plants: PROCTOR, VERMONT

Branch sales offices (Location of Branch Finishing Plants indicated by (F))

BOSTON 16, MASS., 100 Boylston St.
CHICAGO 40, ILL., 5691 North Ridge Ave.
CLEVELAND 13, OHIO, 3321 Prospect Ave.
DALLAS 13, TEX., 1513 Wall St. (F)
HOUSTON 10, TEX., 310 Binghurst St. (F)
LOS ANGELES 4, CALIF., 3529 Council St.
NEW YORK 17, N. Y., 101 Park Ave.
PHILADELPHIA 4, PA., 3707 Walnut St.
REMINGTON, IND., (F)
SAN FRANCISCO 24, CALIF., 6000 Third St. (F)
WASHINGTON, D. C.
448 Pennsylvania Bldg.
(13th St. & Pennsylvania Ave.
PETERBOROUGH, ONT., CAN.,
Ontario Marble Company, Limited, Maria St. (F)
TORONTO 5, ONT., CAN.,
Ontario Marble Company, Limited, 250 Madison St.
Brooks Marble & Tile Company, Limited, 250 Madison St. (F)
VANCOUVER, B. C.
Continental Marble Co., Ltd., 1009 East Georgia St. (F)

See Sweet's file Index or write for our catalogs on Interior Marble and Granite Veneer

Printed in U.S.A.